

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (Original) An isolated nucleic acid comprising a nucleotide sequence encoding an S. epidermidis polypeptide selected from the group consisting of SEQ ID NO: 3773 - SEQ ID NO: 7544.
2. (Original) A recombinant expression vector comprising the nucleic acid of claim 1 operably linked to a transcription regulatory element.
3. (Original) A cell comprising a recombinant expression vector of claim 2.
4. (Original) A method for producing an S. epidermidis polypeptide comprising culturing a cell of claim 3 under conditions that permit expression of the polypeptide.
5. (Original) An isolated nucleic acid comprising a nucleotide sequence encoding an S. epidermidis polypeptide or a fragment thereof, said nucleic acid selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 3772.
6. (Original) A recombinant expression vector comprising the nucleic acid of claim 5 operably linked to a transcription regulatory element.
7. (Original) A cell comprising a recombinant expression vector of claim 6.
8. (Original) A method for producing an S. epidermidis polypeptide comprising culturing a cell of claim 7 under conditions that permit expression of the polypeptide.
9. (Original) A probe comprising a nucleotide sequence consisting of at least eight contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 3772.

10. (Original) An isolated nucleic acid comprising a nucleotide sequence of at least eight nucleotides in length, wherein the sequence is hybridizable to a nucleic acid having a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 3772.
11. (Original) A vaccine composition for prevention or treatment of an *S. epidermidis* infection comprising an effective amount of a nucleic acid of claim 5 and a pharmaceutically acceptable carrier.
12. (Original) A vaccine composition of claim 11, further comprising an adjuvant.
13. (Original) A vaccine composition of claim 11, further comprising one or more additional active ingredients.
14. (Original) A method of treating a subject for *S. epidermidis* infection comprising administering to a subject a vaccine composition of claim 11, such that treatment of *S. epidermidis* infection occurs.
15. (Original) A method of claim 14, wherein the treatment is a prophylactic treatment.
16. (Original) A method of claim 14, wherein the treatment is a therapeutic treatment.
17. (Original) A recombinant or substantially pure preparation of an *S. epidermidis* polypeptide or a fragment thereof, wherein said polypeptide is selected from the group consisting of SEQ ID NO: 3773 - SEQ ID NO: 7544.
18. (Original) A vaccine composition for prevention or treatment of an *S. epidermidis* infection comprising an effective amount of an *S. epidermidis* polypeptide of claim 17 and a pharmaceutically acceptable carrier.
19. (Original) A vaccine composition of claim 18, further comprising an adjuvant.

20. (Original) A vaccine composition of claim 18, further comprising one or more additional active ingredients.
21. (Original) A method of treating a subject for *S. epidermidis* infection comprising administering to a subject a vaccine composition of claim 18, such that treatment of *S. epidermidis* infection occurs.
22. (Original) A method of claim 21, wherein the treatment is a prophylactic treatment.
23. (Original) A method of claim 21, wherein the treatment is a therapeutic treatment.
24. (Original) A method for detecting the presence of a *Staphylococcus* nucleic acid in a sample comprising:
 - (a) contacting a sample with a nucleic acid of claim 5 under conditions in which a hybrid can form between the probe and a *Staphylococcus* nucleic acid in the sample; and
 - (b) detecting the hybrid formed in step (a), wherein detection of a hybrid indicates the presence of a *Staphylococcus* nucleic acid in the sample.
25. (Original) A computer readable medium having recorded thereon the nucleotide sequences depicted in SEQ ID NO: 1 - SEQ ID NO: 3772 or fragments thereof.
26. (Original) A computer based system for identifying fragments of the *Staphylococcus* genome of commercial importance comprising the following elements:
 - a) a data storage means comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 3702 or fragments thereof;
 - b) a search means for comparing a target sequence to the nucleotide sequences of the data storage means of step (a) to identify homologous sequences, and;
 - c) a retrieval means for obtaining said homologous sequences(s) of step (b).

27. (Original) A computer based system for identifying fragments of the *Staphylococcus* plasmids of commercial importance comprising the following elements:
- a) a data storage means comprising the nucleotide sequences SEQ ID NO: 3703 - SEQ ID NO: 3772 or fragments thereof;
 - b) a search means for comparing a target sequence to the nucleotide sequences of the data storage means of step (a) to identify homologous sequences, and;
 - c) a retrieval means for obtaining said homologous sequences(s) of step (b).
28. (Original) A method of identifying commercially important nucleic acid fragments of the *Staphylococcus* genome comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 3772 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence is not randomly selected.
29. (Original) A method of identifying commercially important nucleic acid fragments of the *Staphylococcus* plasmids comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 3703 - SEQ ID NO: 3772 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence is not randomly selected.
30. (Original) A method for identifying an expression modulating fragment of the *Staphylococcus* genome comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 3772 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence comprises sequences known to regulate gene expression.
31. (Original) A method for identifying an expression modulating fragment of the *Staphylococcus* plasmid comprising the step of comparing a database comprising the

nucleotide sequences SEQ ID NO: 3703 - SEQ ID NO: 3772 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target sequence comprises sequences known to regulate gene expression.


32. (New) An isolated nucleic acid comprising a nucleotide sequence, wherein the nucleotide sequence is hybridizable under high stringency conditions to SEQ ID NOs:1 - SEQ ID NO: 3772 or their complements.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (781) 398-2300.

Respectfully submitted,

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